

December 1, 1955

Dr. Henry Tsuchiya
Northern Regional Laboratory
Peoria, Illinois

Dear Dr. Tsuchiya:

I am interested in trying some cytological experiments which involve mounting *E. coli* in a medium whose refractive index is higher than that of water. (I also have some other fractionation experiments in mind that would have a similar requirement for a "diluent" of water to increase its density). It occurred to me that some of your dextrans might fill the bill, and I would be very grateful to you for your advice, and, if possible some samples of relevant materials.

Since I can readily tolerate a tonicity up to about M/5 (or higher), the limiting factor is likely to be solubility versus viscosity; I would imagine that some of your products in the MW range of 2000-10,000 might be the best to use. Have you any data on the refractive indices/and solubilities (in water) of your products whose viscosities would not be prohibitive? I would hesitate to work at a viscosity higher, say, than 100x that of water, and would prefer this to be minimised. The ready availability of the product would, of course, be another important consideration.

With best regards,

Yours sincerely,

Joshua Lederberg
Professor of Genetics

/and densities